Introduction

Technical data

3RG78 41 light curtains for Category 2 acc. to EN 954-1

Safety category acc. to EN, IEC 61496-1, -2	Type 2 (testable) in combination with an external evaluation unit of Type 2 (SIGUARD 3RG78 47 evaluation unit)
Protective field depth	
• for 30 mm resolution	150 to 2400 mm
• for 55 mm resolution	300 to 2400 mm
• for 80 mm resolution	450 to 2400 mm
Protective field width, range	0.3 to 6 m
Detection capability (resolution)	30 mm, 55 mm or 80 mm
Response time (from interruption of protective field until safety outputs switch off)	The response time is dependent on the height of the protected field (for precise response times, see the operating instructions)
• for 30 mm resolution	8 to 29 ms
• for 55 mm resolution	8 to 19 ms
• for 80 mm resolution	8 to 15 ms
Reactivation time (from enabling the protective field until safety outputs switch on)	0.5 ms for all resolutions (for extremely brief interruptions of the protective field, the OSSD output remains switched off for at least 100 ms)
Supply voltage	DC 24 V ± 20% (external power pack with safe isolation from the supply and 20 ms bridging of supply failures
Current consumption	
• Transmitter	75 mA
• Receiver	75 mA (without load)

Protection class	I
OSSD output	pnp output, short-circuit proof, max. 100 mA
Pollution output and fault signalling output	pnp output, short-circuit proof, max. 70 mA
Diagnostics interface, receiver	RS 485
Transmitter test input	+24 V = no test, 0 V or high-resist. = test via floating NC cont. or pnp output (sign. for test tripping min. 20 ms)
Test execution time	10 ms
Operating mode	Protection mode without activation and reactivation inhibit
Synchronisation transmitter/receiver	Optical synchronisation, 2 comm. channels selectable
Ambient temperature	
• Operation	0 to +55 °C
• Storage	–25 to +75 °C
Air humidity	15 to 95 % (no condensation)
Degree of protection	IP 65
Electrical connection	M12 circular connector, 8-pin
Connecting cable	7-core, 0.25 mm^2, shielded with integrally extruded connector, length 5 m or 15 m (see access.)
Dimensions	
• Cross-section	17 mm × 33 mm
• Length (with/and connection area)	Protective field height + 96 mm

3RG78 42 light curtains and light arrays for Category 4 acc. to EN 954-1

Safety category acc. to EN, IEC 61 496-1, -2	Type 4 (self-monitoring)
Protective field depth	
• for 14 and 30 mm resolution	150 to 1800 mm
• for 50 mm resolution	450 to 1800 mm
• for 90 mm resolution	750 to 3000 mm
Protective field width, range	
• for 14 mm resolution	0.3 to 6 m
• for 30, 50 and 90 mm resolution	0.8 to 18 m
• for light array (18 m type)	0.8 to 18 m
• for light array (60 m type)	6.0 to 60 m
Detection capability (resolution)	14 mm, 30 mm, 50 mm, 90 mm or whole person with 2, 3 or 4 beams
Response time (from interruption of protective field until safety outputs switch off)	The response time rises with the number of beams (for precise response times, see the technical instructions)
• 14 mm	7 to 39 ms (d-scan: 10 to 78 ms)
• 30 mm	7 to 20 ms (d-scan: 10 to 39 ms)
• 50 mm	17 ms (d-scan: 33 ms)
• 90 mm	13 ms (d-scan: 20 ms)
• 2-, 3-, 4-beam	5 ms (d-scan: 8 ms)
Reactivation time (from enabling the protective field until safety outputs switch on)	0.5 ms for all resolutions (for extremely brief interruptions of the protective field, the safety outputs remain switched off for at least 100 ms)
Supply voltage	DC 24 V ± 20% (external power pack with safe isolation from the supply and 20 ms bridging of supply failure
Current consumption	
• Transmitter	75 mA
• Receiver	180 mA (without load)

Safety outputs	2 failsafe pnp outputs with crossover monitoring
• $U_{a\ min} = U_{vers}$ –2.7 V, $I_{a\ max}$	0.3 A
• Peak current	0.4 A
• Continuous current at 35 °C	0.3 A
• Continuous current at 55 °C	0.22 A
• Max. capacitive load per output	0.3 µF (Channel 2: 0,1 µF)
Pollution output and fault signalling output	pnp output, short-circuit proof, max. 70 mA
Safety and diagnostic interface	RS-485, 57.6 Kbaud
Transmitter test input	Closed-circuit principle, minimum opening time 50 ms
Operating mode	Protection mode without reactivation inhibit
Synchronisation transmitter/receiver	Optical synchronisation, 2 comm. channels selectable
Infrared light interference suppression	2 techniques selectable
• standard	high suppression
• d-scan	extremely high suppression (response time rises with devices with more than 15 beams)
Ambient temperature	
• Operation	0 to +55 °C
• Storage	–25 to +70 °C
Air humidity	15 to 95%
Degree of protection	IP 65
Electrical connection	Via Pg 13.5 screw terminals and plug-in connection
Connecting cable	
• Transmitter	7-core, 0.5 mm^2 (max. 1.0 mm^2)
• Receiver	7-core, 0.5 mm^2 (max. 1.0 mm^2) (shielded if necessary)
Cable length	max. 100 m for 1.0 mm^2
Dimensions	
• Cross-section	55 mm × 52 mm
• Length	234 to 3084 mm depending on protective field height

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Technical data

3RG78 47–4BB standard evaluation unit

Safety cat. acc. to EN 954-1	Category 4
STOP cat. acc. to EN 60 204-1(11/98)	STOP category 0
Operational voltage U_B	AC/DC 24 V, –15% to +10%
Residual ripple (for DC)/	2.4 V_{pp}
Frequency (for AC)	50 to 60 Hz
Clearance and leakage paths	4 kV acc. to DIN VDE 0110 (04.97)
Power consumption	2.1 W (for AC)/1.7 W (for DC)
External protection for supply circuit	1 A slow
Output contacts	2 NO, 1 NC $AgSnO_2$, gold plated
Switching capacity to IEC 60 947-5-1	
• AC-15, 230 V	6 A
• DC-13, 24 V (360 operating cycles/h)	6 A
• DC-13: 24 V (3600 operating cycles/h)	3 A
Max. continuous current per current path	6 A
Contact protection per current path	6.3 A quick or 4 A slow
Max. total current for all current paths	12 A
Max. switching frequency	3600 operating cycles
Mechanical endurance	10×10^6 operating cycles

Pick-up delay	
• Manual start	70 ms
• Automatic start	230 ms
Release delay, response time	20 ms
Minimum on-time S34, S35	80 ms
Electronic backup: start/restart time	2 s/2 s
Control voltage/current on S11, S22, S31	DC 24 V/20 mA
Permissible input conductor resistance	< 70 Ω
Emitted interference	EN 50 081-1, -2
Interference immunity	EN 50 082-2
Operating temperature	–25 °C to + 55 °C
Degree of protection	Housing IP 40, terminals IP 20
Conductor cross-sections	
• finely stranded	2 × 0.14 to 0.75 mm^2
• finely stranded with end sleeve	2 × 0.25 to 0.5 mm^2
• finely stranded with twin end sleeve	2 × 1.5 mm^2
• solid	1 × 0.14 to 2.5 mm^2
• finely stranded with end sleeve	2 × 0.25 to 2.5 mm

3RG78 47 intelligent evaluation units

Protection acc. to EN, IEC 61496 T1	Type 4
Safety category acc. to EN 954-1	Category 4
STOP cat. acc. to EN 60 204-1(11/98)	STOP category 0
Supply voltage	24 V DC, ± 20%, external power pack with safe isolation from the supply and bridging of 20 ms voltage drop is necessary
Current consumption	Approx. 200 mA without ext. load
External protection (power supply)	2.5 A mT
Safety sensors that can be connected (expanded versions)	1 light curtain, Type 4, or up to 2 light curtains of Type 2 (all acc. to IEC 61496)
	up to 2 light curtains of Type 4, or up to 4 light curtains of Type 2 (all acc. to IEC 61496)
Test outputs T1 and T2, test interval	200 ms
Available functions	
• All versions	Start/restart inhibit, contactor control, diagnosis
• Versions with cycle control	Protection, single-pulse and two-pulse mode
• Versions with muting function	Sequential muting, parallel muting, parallel double muting (only 3RG78 47-4.G)

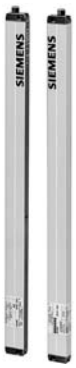
Control input: contactor control (EDM)	Feedback of positively-driven contacts of downstream contactors
Control input: start/restart inhibit (Reset)	Floating NO (button or key-switch)
Connection of muting sensors that cannot be tested	Signal level in damped state: active high, +24 V
Connection of muting sensors that can be tested	active high, +24 V, plus test pulses T1 or T2
Outputs: Muting displays for lamps 24 V, max. 5 W	pnp switching outputs muting function On, active high, +24 V, 200 mA max.
Signal outputs (acc. to variants)	Light curtain free/interrupted; switching state relay/transistor output; restart inhibit locked/unlocked; status of muting function; muting error; warning muting lamp defective; internal errors, etc.
Operating temperature	0 to +55 °C
Degree of protection	IP 20, must be installed in switchgear cabinet or housing to IP 54 degree of protection upwards
Installation	Mouting on 35 mm standard mounting rail
Connection technique	Plug-in coded screw-type terminals up to 2.5 mm^2

Outputs	Relay outputs	Semiconductor outputs
OSSD safety outputs	2 safety-related NO contacts	2 safety-related pnp semiconductor outputs with crossover detection
Switching voltage/Switching current	60 V DC, 250 V AC, max.´6 A	24 V DC, max. 300 mA
Only extended versions	1 safety-related NC contact, 60 V DC, 250 V AC, max. 6 A minimum switching current 20 mA	
OSSD external protection	6 AT	–
OSSD response time of SIGUARD evaluation unit (without light curtain)		
• for light curtain, Type 4, with semiconductor output	18 ms	8 ms
• for light curtain, Type 2	54 ms	44 ms
• for safety switches	54 ms	44 ms
OSSD reactivation time	100 ms	100 ms
OSSD suitable spark quenching via the coils of the downstream relay	necessary	–

3RG784 SIGUARD Safety Light Curtains and Light Arrays

3RG78 41 light curtains for category 2 to EN 954-1

Selection and ordering data

	Protective field height		Standard light curtains, host units with guest connection, guest units with **30 mm** resolution		with **55 mm** resolution		with **80 mm** resolution		Weight approx.
			Order No.	Price 1 unit	Order No.	Price 1 unit	Order No.	Price 1 unit	
	mm (inches)								kg
3RG78 41 	150[1]) (5.9")	Transmitter	**3RG78 41–3DB00**		–		–		0.15
		Receiver	**3RG78 41–3DB01**		–		–		0.15
	225[1]) (8.86")	Transmitter	**3RG78 41–3DC□0**		–		–		0.2
		Receiver	**3RG78 41–3DC□1**		–		–		0.2
	300[2]) (11.81")	Transmitter	**3RG78 41–3DD□0**		**3RG78 41–3FD00**		–		0.25
		Receiver	**3RG78 41–3DD□1**		**3RG78 41–3FD01**		–		0.25
	450 (17.72")	Transmitter	**3RG78 41–3DE□0**		**3RG78 41–3FE□0**		**3RG78 41–3HE□0**		0.3
		Receiver	**3RG78 41–3DE□1**		**3RG78 41–3FE□1**		**3RG78 41–3HE□1**		0.3
	600 (23.62")	Transmitter	**3RG78 41–3DF□0**		**3RG78 41–3FF□0**		**3RG78 41–3HF□0**		0.4
		Receiver	**3RG78 41–3DF□1**		**3RG78 41–3FF□1**		**3RG78 41–3HF□1**		0.4
	750 (29.53")	Transmitter	**3RG78 41–3DG□0**		**3RG78 41–3FG□0**		–		0.5
		Receiver	**3RG78 41–3DG□1**		**3RG78 41–3FG□1**		–		0.5
	900 (35.43")	Transmitter	**3RG78 41–3DH□0**		**3RG78 41–3FH□0**		**3RG78 41–3HH□0**		0.6
		Receiver	**3RG78 41–3DH□1**		**3RG78 41–3FH□1**		**3RG78 41–3HH□1**		0.6
	1050 (41.34")	Transmitter	**3RG78 41–3DJ□0**		**3RG78 41–3FJ□0**		–		0.7
		Receiver	**3RG78 41–3DJ□1**		**3RG78 41–3FJ□1**		–		0.7
	1200 (47.24")	Transmitter	**3RG78 41–3DK□0**		**3RG78 41–3FK□0**		**3RG78 41–3HK□0**		0.75
		Receiver	**3RG78 41–3DK□1**		**3RG78 41–3FK□1**		**3RG78 41–3HK□1**		0.75
	1350 (53.15")	Transmitter	**3RG78 41–3DL□0**		**3RG78 41–3FL□0**		–		0.85
		Receiver	**3RG78 41–3DL□1**		**3RG78 41–3FL□1**		–		0.85
	1500 (59.06")	Transmitter	**3RG78 41–3DM□0**		**3RG78 41–3FM□0**		**3RG78 41–3HM□0**		0.9
		Receiver	**3RG78 41–3DM□1**		**3RG78 41–3FM□1**		**3RG78 41–3HM□1**		0.9
	1650 (64.96")	Transmitter	**3RG78 41–3DN□0**		**3RG78 41–3FN□0**		–		1.0
		Receiver	**3RG78 41–3DN□1**		**3RG78 41–3FN□1**		–		1.0
	1800 (70.87")	Transmitter	**3RG78 41–3DP□0**		**3RG78 41–3FP□0**		**3RG78 41–3HP□0**		1.1
		Receiver	**3RG78 41–3DP□1**		**3RG78 41–3FP□1**		**3RG78 41–3HP□1**		1.1
	Order No. suffix								
	• Standard light curtains		**0**		**0**		**0**		
	• Host with guest connection		**1**[1])		**1**[2])		**1**		
	• Guest unit		**2**		**2**		**2**		

Accessories

	Length	Design	Order No.	Price 1 unit	Weight approx.
	mm				kg
Protection profile and mounting profile for 3RG78 41 light curtains					
	150		**3RG78 48–0GB**		
	225		**3RG78 48–0GC**		
	300		**3RG78 48–0GD**		
	450		**3RG78 48–0GE**		
	600		**3RG78 48–0GF**		
	750		**3RG78 48–0GG**		
	900		**3RG78 48–0GH**		
	1050		**3RG78 48–0GJ**		
	1200		**3RG78 48–0GK**		
	1350		**3RG78 48–0GL**		
	1500		**3RG78 48–0GM**		
	1650		**3RG78 48–0GN**		
	1800		**3RG78 48–0GP**		
Connecting cable with M 12 connector for 3RG78 41 light curtains					
	5 m	straight	**3RG78 48–1BA**		
	5 m	angled 90°	**3RG78 48–1BC**		
	15 m	straight	**3RG78 48–1BD**		
	15 m	angled 90°	**3RG78 48–1BE**		

1) Host with guest connection, 30 mm resolution, not available with protective field heights of 150 mm and 225 mm.

2) Host with guest connection, 55 mm resolution, not available with protective field heights of 300 mm.

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Selection and ordering data

Light curtains with Brad Harrison mini change

Type 4 according to IEC 61496-1,-2

	Protective field height mm (inches)		Standard light curtains, host units with guest connection with **14 mm** resolution Order No.	Price 1 unit	with **30 mm** resolution Order No.	Price 1 unit	Weight approx. kg
3RG78 42	150[1]) (5.91")	Transmitter	**3RG78 42–□B□0**		**3RG78 42–□B□0**		0.3
		Receiver	**3RG78 42–□B□1**		**3RG78 42–□B□1**		0.3
	225 (8.86")	Transmitter	**3RG78 42–□C□0**		**3RG78 42–□C□0**		0.5
		Receiver	**3RG78 42–□C□1**		**3RG78 42–□C□1**		0.5
	300 (11.81")	Transmitter	**3RG78 42–□D□0**		**3RG78 42–□D□0**		0.7
		Receiver	**3RG78 42–□D□1**		**3RG78 42–□D□1**		0.7
	450 (17.72")	Transmitter	**3RG78 42–□E□0**		**3RG78 42–□E□0**		1.0
		Receiver	**3RG78 42–□E□1**		**3RG78 42–□E□1**		1.0
	600 (23.62")	Transmitter	**3RG78 42–□F□0**		**3RG78 42–□F□0**		1.3
		Receiver	**3RG78 42–□F□1**		**3RG78 42–□F□1**		1.3
	750 (29.53")	Transmitter	**3RG78 42–□G□0**		**3RG78 42–□G□0**		1.7
		Receiver	**3RG78 42–□G□1**		**3RG78 42–□G□1**		1.7
	900 (35.43")	Transmitter	**3RG78 42–□H□0**		**3RG78 42–□H□0**		2.0
		Receiver	**3RG78 42–□H□1**		**3RG78 42–□H□1**		2.0
	1050 (41.34")	Transmitter	**3RG78 42–□J□0**		**3RG78 42–□J□0**		2.3
		Receiver	**3RG78 42–□J□1**		**3RG78 42–□J□1**		2.3
	1200 (47.24")	Transmitter	**3RG78 42–□K□0**		**3RG78 42–□K□0**		2.6
		Receiver	**3RG78 42–□K□1**		**3RG78 42–□K□1**		2.6
	1350 (53.15")	Transmitter	**3RG78 42–□L□0**		**3RG78 42–□L□0**		3.0
		Receiver	**3RG78 42–□L□1**		**3RG78 42–□L□1**		3.0
	1500 (59.06")	Transmitter	**3RG78 42–□M□0**		**3RG78 42–□M□0**		3.3
		Receiver	**3RG78 42–□M□1**		**3RG78 42–□M□1**		3.3
	1650 (64.96")	Transmitter	**3RG78 42–□N□0**		**3RG78 42–□N□0**		3.6
		Receiver	**3RG78 42–□N□1**		**3RG78 42–□N□1**		3.6
	1800 (70.87")	Transmitter	**3RG78 42–□P□0**		**3RG78 42–□P□0**		4.0
		Receiver	**3RG78 42–□P□1**		**3RG78 42–□P□1**		4.0
Order No. suffix							
• Standard light curtains			**4 0**		**4 0**		
• Host with guest connection			**4 1**[1]**)**		**4 1**[1]**)**		
• Guest unit			**6 2**		**6 2**		

Connection cables with Brad Harrison mini change female connector

All 3RG7842 series Light Curtain and Light Array transmitters use 5 pin cables
All 3RG7844 series Light Curtain and Light Array transmitters use 3 pin cables

Connection with	Length	No. of pins	Order No.	Price 1 unit	Weight approx.
Transmitter	6'	3	**3RG7848-3AK**		
Transmitter	6'	5	**3RG7848-0CB00**		
Transmitter	12'	3	**3RG7848-3BK**		
Transmitter	12'	5	**3RG7848-0DB00**		
Transmitter	20'	3	**3RG7848-3CK**		
Transmitter	20'	5	**3RG7848-0EB00**		
Transmitter	30'	3	**3RG7848-3DK**		
Transmitter	30'	5	**3RG7848-0FB00**		
Transmitter	40'	5	**3RG7848-0GB00**		
Transmitter	50'	5	**3RG7848-0HB00**		
Transmitter	66'	3	**3RG7848-3EK**		

Connection cables (With Brad Harrison Mini Change female connector)
All 3RG7842 and 3RG7844 series Light Curtain and Light Array receivers use 7 pin cables

Receiver	6'	7	**3RG7848-0CB01**		
Receiver	12'	7	**3RG7848-0DB01**		
Receiver	20'	7	**3RG7848-0EB01**		
Receiver	30'	7	**3RG7848-0FB01**		
Receiver	40'	7	**3RG7848-0GB01**		
Receiver	50''	7	**3RG7848-0HB01**		

1)Host with guest connection is not supplied with protective field depth of 150 mm.

2) For light curtains with AS-Interface connection see section 16.

3) Two standard mounting brackets are supplied with all 3RG7842 devices (they can also be ordered as an accessory under the Order No. 3RG78 48-0AB).

3RG784 SIGUARD Safety Light Curtains and Light Arrays

3RG78 42 light curtains for category 4 to EN 954-1

Selection and ordering data

	Protective field height		Standard light curtains, host units with guest connection, guest units with **50 mm** resolution		with **90 mm** resolution		Weight approx.
			Order No.	Price 1 unit	Order No.	Price 1 unit	
	mm (inches)						kg
Light curtains with Brad Harrison mini change							
	Type 4 according to IEC 61496-1,-2						
3RG78 42	450 (17.72")	Transmitter	**3RG78 42–☐EE☐0**		–		1.0
		Receiver	**3RG78 42–☐EE☐1**		–		1.0
	600 (23.62")	Transmitter	**3RG78 42–☐EF☐0**		–		1.3
		Receiver	**3RG78 42–☐EF☐1**		–		1.3
	750 (29.53")	Transmitter	**3RG78 42–☐EG☐0**		**3RG78 42–☐JG☐0**		1.7
		Receiver	**3RG78 42–☐EG☐1**		**3RG78 42–☐JG☐1**		1.7
	900 (35.43")	Transmitter	**3RG78 42–☐EH☐0**		**3RG78 42–☐JH☐0**		2.0
		Receiver	**3RG78 42–☐EH☐1**		**3RG78 42–☐JH☐1**		2.0
	1050 (41.34")	Transmitter	**3RG78 42–☐EJ☐0**		**3RG78 42–☐JJ☐0**		2.3
		Receiver	**3RG78 42–☐EJ☐1**		**3RG78 42–☐JJ☐1**		2.3
	1200 (47.24")	Transmitter	**3RG78 42–☐EK☐0**		**3RG78 42–☐JK☐0**		2.6
		Receiver	**3RG78 42–☐EK☐1**		**3RG78 42–☐JK☐1**		2.6
	1350 (53.15")	Transmitter	**3RG78 42–☐EL☐0**		**3RG78 42–☐JL☐0**		3.0
		Receiver	**3RG78 42–☐EL☐1**		**3RG78 42–☐JL☐1**		3.0
	1500 (59.06")	Transmitter	**3RG78 42–☐EM☐0**		**3RG78 42–☐JM☐0**		3.3
		Receiver	**3RG78 42–☐EM☐1**		**3RG78 42–☐JM☐1**		3.3
	1650 (64.96")	Transmitter	**3RG78 42–☐EN☐0**		**3RG78 42–☐JN☐0**		3.6
		Receiver	**3RG78 42–☐EN☐1**		**3RG78 42–☐JN☐1**		3.6
	1800 (70.87")	Transmitter	**3RG78 42–☐EP☐0**		**3RG78 42–☐JP☐0**		4.0
		Receiver	**3RG78 42–☐EP☐1**		**3RG78 42–☐JP☐1**		4.0
	2100 (82.68")	Transmitter	**3RG78 42–☐ER☐0**		**3RG78 42–☐JR☐0**		4.3
		Receiver	**3RG78 42–☐ER☐1**		**3RG78 42–☐JR☐1**		4.3
	2400 (94.49")	Transmitter	**3RG78 42–☐ES☐0**		**3RG78 42–☐JS☐0**		4.6
		Receiver	**3RG78 42–☐ES☐1**		**3RG78 42–☐JS☐1**		4.6
	2700 (106.30")	Transmitter	**3RG78 42–☐ET☐0**		**3RG78 42–☐JT☐0**		5.0
		Receiver	**3RG78 42–☐ET☐1**		**3RG78 42–☐JT☐1**		5.0
	3000 (118.11")	Transmitter	**3RG78 42–☐EU☐0**		**3RG78 42–☐JU☐0**		5.3
		Receiver	**3RG78 42–☐EU☐1**		**3RG78 42–☐JU☐1**		5.3
	Order No. suffix						
	• Standard light curtains		**4 0**		**4 0**		
	• Host with guest connection		**4 1**		**4 1**		
	• Guest unit		**6 2**		**6 2**		

	Beam spacing			Sensing range **18 m**		Sensing range **60 m**		Weight approx.
				Order No.	Price 1 unit	Order No.	Price 1 unit	
	mm							kg
Light arrays with Brad Harrison mini change								
3RG78 42	500	Transmitter	2-beam	**3RG78 42–4SE00**		**3RG78 42–4SE50**		1.3
		Receiver		**3RG78 42–4SE01**		**3RG78 42–4SE51**		1.3
	400	Transmitter	3-beam	**3RG78 42–4PG00**		**3RG78 42–4PG50**		2.0
		Receiver		**3RG78 42–4PG01**		**3RG78 42–4PG51**		2.0
	300	Transmitter	4-beam	**3RG78 42–4MH00**		**3RG78 42–4MH50**		2.3
		Receiver		**3RG78 42–4MH01**		**3RG78 42–4MH51**		2.3

1) Two standard mounting brackets are supplied with all 3RG7842 devices (they can also be ordered as an accessory under the Order No. 3RG78 48-0AB).

2) For light curtains and light grids with AS-Interface connection, see section 16.

3) See page 9/103 for connection cables.

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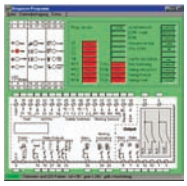
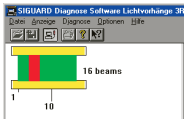
Selection and ordering data

	Design	Relay output Order No.	Price 1 unit	Semiconductor output Order No.	Price 1 unit	Weight approx. kg
Evaluation units						
	Category 4 to EN 954-1					
3RG78 47-4BB	Standard, restart inhibit, contactor control (no diagnosis or test function, only suitable for light curtains and light arrays of Category 4). Not for use with category 2 light curtains.	**3RG78 47–4BB**		**–**		
3RG78 47-4BE	Standard, restart inhibit, contactor control [2]) Standard, restart inhibit, contactor control, extended version [1])	**3RG78 47–4BD** **3RG78 47–4BE**		**3RG78 47–4DD** **3RG78 47–4DE**		
3RG78 47-4BF	Muting function, restart inhibit, contactor control [2]) Muting function, restart inhibit, contactor control, extended version [1])	**3RG78 47–4BF** **3RG78 47–4BG**		**3RG78 47–4DF** **3RG78 47–4DG**		
3RG78 47-4BJ	Cycle control, restart inhibit, contactor control [2]) Cycle control, restart inhibit, contactor control, extended version [1])	**3RG78 47–4BH** **3RG78 47–4BJ**		**3RG78 47–4DH** **3RG78 47–4DJ**		
3RG78 47-4BL	Muting function and cycle control, restart inhibit, contactor control [2]) Muting function and cycle control, restart inhibit, contactor control, extended version [1])	**3RG78 47–4BK** **3RG78 47–4BL**		**3RG78 47–4DK** **3RG78 47–4DL**		
Diagnostic software for evaluation units						
	Diagnostics software for evaluation units, with PC cable [3])	**3RG78 48–4AC**				

1) Up to 2 light curtains of Type 4 or 4 light curtains of type 2 as well as additional protection switches (e. g. EMERGENCY-STOP) can be connected to the extended version.
2) Up to 2 light curtains of type 2 or 1 light curtain of type 2 as well as additional protection switches (e. g. EMERGENCY-STOP) can be connected.
3) Not for use with 3RG7847-4BB.
4) See page 9/101 for technical data.

3RG78 48 accessories

Accessories

	Length	Order No.	Price	Weight approx.
	mm		1 unit	kg
	Mounting columns for 3RG7842 / 44			
	1060	**3RG78 48–0CL**		
	1360	**3RG78 48–0CP**		
	1660	**3RG78 48–0CR**		
	1960	**3RG78 48–0CU**		
	Reflecting mirror columns			
	1060	**3RG78 48–0DL**		
	1360	**3RG78 48–0DP**		
	1660	**3RG78 48–0DR**		
	1960	**3RG78 48–0DU**		
	Reflecting mirror columns for light arrays			
	Adjustable separate mirrors			
	1060, 2-beam	**3RG78 48–0FL**		
	1360, 3-beam	**3RG78 48–0FP**		
	1360, 4-beam	**3RG78 48–0FR**		
	Reflecting mirrors			
	410	**3RG78 48–0ED**		
	510	**3RG78 48–0EE**		
	625	**3RG78 48–0EF**		
	740	**3RG78 48–0EG**		
	830	**3RG78 48–0EH**		
	930	**3RG78 48–0EJ**		
	1030	**3RG78 48–0EK**		
	1125	**3RG78 48–0EL**		
	1220	**3RG78 48–0EM**		
	1365	**3RG78 48–0EN**		
	1510	**3RG78 48–0EP**		
	1650	**3RG78 48–0EQ**		
	1830	**3RG78 48–0ER**		
	Installation parts for 3RG7842 / 44			
	Bracket, hinged with vibration damping (including 2 screws and 2 keyway slides)	**3RG78 48–0BB**		
	Standard holding bracket kit (1 kit = 2 units incl. screws)	**3RG78 48–0AB**		
	Keyway blocks (1 kit = 2 units)	**3RG78 48–0AC**		
	Laser alignment aid			
	Standard version	**3RG78 48–1AB**		
	For installation with mounting columns	**3RG78 48–1AG**		
	Test rod			
	for 14 and 30 mm resolution	**3RG78 48–0AH**		
	**Diagnostics software**			
	for light curtains and light arrays	**3RG78 48–1AC**		
	RS485/232 converter			
	for diagnostics interface	**3RG78 48–1AD**		
	Cables			
	RS232 connecting cable	**3RG78 48–1AE**		
	Diagnostics cable kit			
	• for light curtains Cat. 4, Brad Harrison	**3RG78 48–1AK**		
	• for light curtains Cat. 2, straight connector	**3RG78 48–1AL**		
	• for light curtains Cat. 2, angled connector	**3RG78 48–1AM**		

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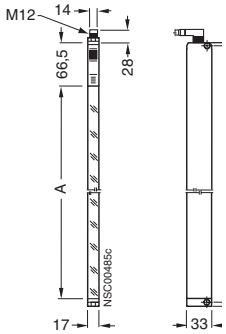
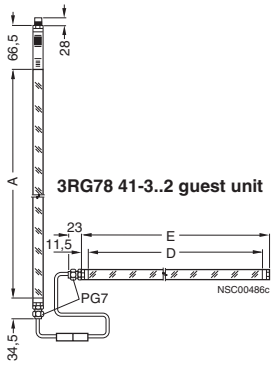
Dimension drawings

3RG78 41-3..0 standard light curtains

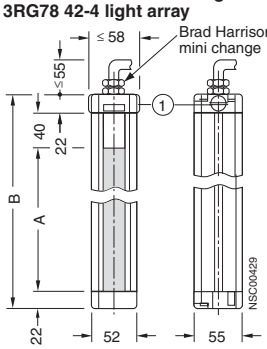


Type	A	B	C	D	E
3RG78 41-3.B..	170.5	248.5	238.5	120.5	143.5
3RG78 41-3.C..	245.5	323.5	313.5	195.5	218.5
3RG78 41-3.D..	320.5	398.5	388.5	270.5	293.5
3RG78 41-3.E..	470.5	548.5	538.5	420.5	443.5
3RG78 41-3.F..	620.5	698.5	688.5	570.5	593.5
3RG78 41-3.G..	770.5	848.5	838.5	720.5	743.5
3RG78 41-3.H..	920.5	998.5	988.5	870.5	893.5
3RG78 41-3.J..	1 070.5	1 148.5	1 138.5	1 020.5	1043.5
3RG78 41-3.K..	1 220.5	1 298.5	1 288.5	1 170.5	1193.5
3RG78 41-3.L..	1 370.5	1 448.5	1 438.5	1 320.5	1343.5
3RG78 41-3.M..	1 520.5	1 598.5	1 588.5	1 470.5	1493.5
3RG78 41-3.N..	1 670.5	1 748.5	1 738.5	1 620.5	1643.5
3RG78 41-3.P..	1 820.5	1 898.5	1 888.5	1 770.5	1793.5

3RG78 41-3..1 host with guest connection

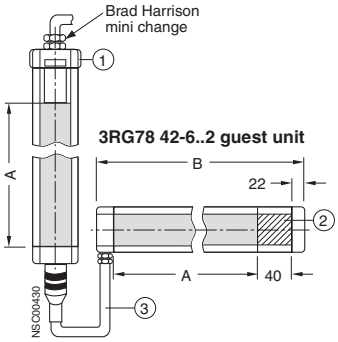


3RG78 42-4..0 standard light curtains
3RG78 42-4 light array

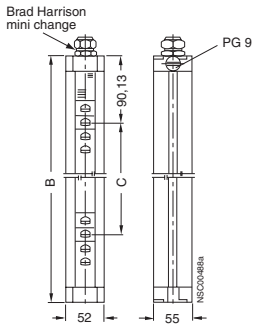


Notes for 3RG7841 / 42:
① Pg 9 sealing cap
② No active protective field
③ Connecting cable (250 mm long) including outlet M 12
A Protective field height (see Pages 9/104 and 9/105)
B Overall length = protective field A + 84 mm

3RG78 42-4..1 host with guest connection

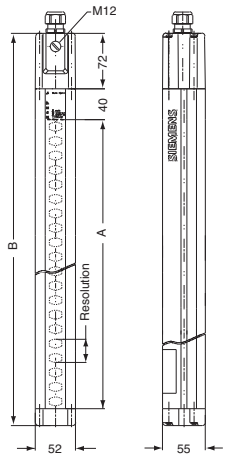


3RG78 42-4 light array



Type	B	C	No. of beams
3RG78 42-4M	1134	300	4
3RG78 42-4P	984	400	3
3RG78 42-4S	684	500	2

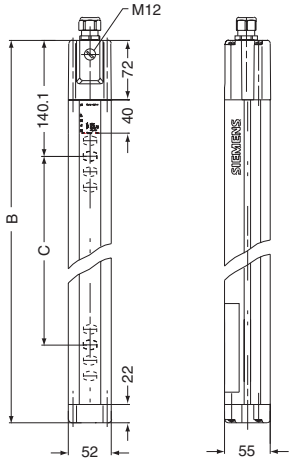
3RG7844-4 light curtains



Notes for 3RG7844:
A Protective field height (see Pages 9/114 and 9/115)
B Overall length = protective field A + 134 mm
C Resolution

Type	B	C	No. of beams
3RG7844-4SM	1184	300	4
3RG7844-4SP	1034	400	3
3RG7844-4SS	734	500	2

3RG7844-4 light array

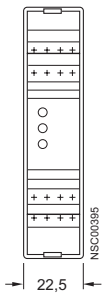


3RG78 47 evaluation units and 3RG78 48 accessories

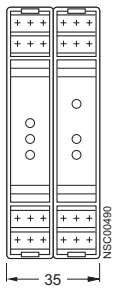
Dimension drawings

Evaluation units

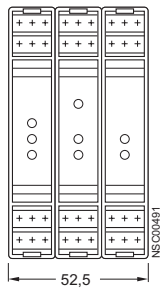
3RG78 47-4BB

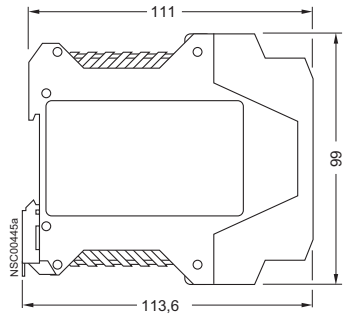


3RG78 47-4.D/E/H/J



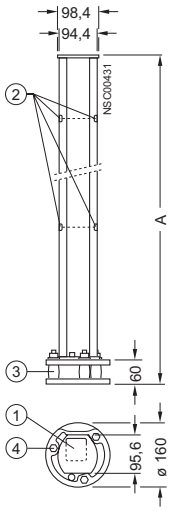
3RG78 47-4.F/G/K/L



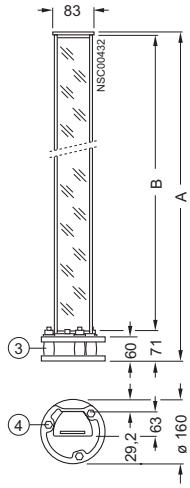


Accessories

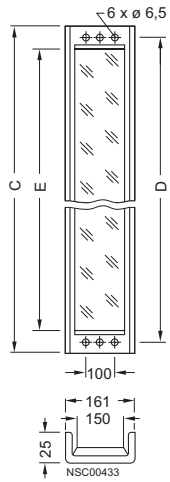
3RG78 48-0C. mounting column



3RG78 48-0D., 3RG78 48-0F. reflective mirror column



3RG78 48-0E. reflective mirror

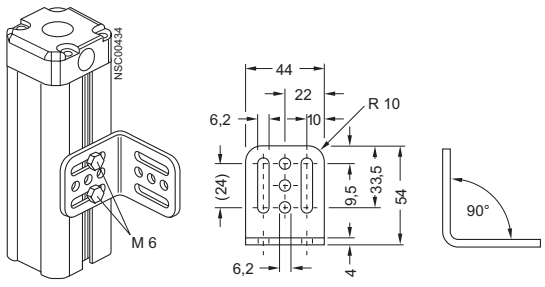


Type	C	D	E
3RG78 48-0ED	480	460	410
3RG78 48-0EE	580	560	510
3RG78 48-0EF	695	675	625
3RG78 48-0EG	810	790	740
3RG78 48-0EH	900	880	830
3RG78 48-0EJ	1000	980	930
3RG78 48-0EK	1100	1080	1030
3RG78 48-0EL	1195	1175	1125
3RG78 48-0EM	1290	1270	1220
3RG78 48-0EN	1435	1415	1365
3RG78 48-0EP	1580	1560	1510
3RG78 48-0EQ	1720	1700	1650
3RG78 48-0ER	1900	1880	1830

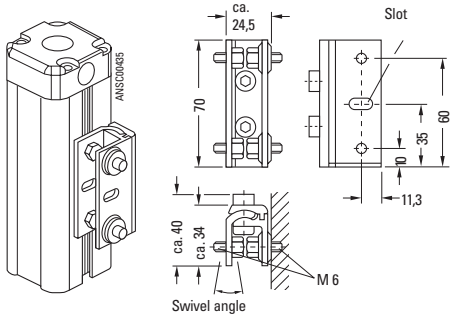
① Light curtain
② 8 drilled holes, Ø 16 mm
③ Plastic spring element with return action
④ 3 drilled holes in floor for wall plugs, Ø 10 mm, 80 mm deep

Type	A	B
3RG78 48-0.L	1060	974
3RG78 48-0.P	1360	1274
3RG78 48-0.R	1660	1574
3RG78 48-0.U	1960	1874

3RG78 48-0AB standard mounting bracket
(included with light curtain / array)



3RG78 48-0BB bracket
swivel-type with vibration damping



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